

WHAT IS CLAIMED IS:

1. A binding assay device comprising:
a porous membrane comprising a material enabling
5 capillary movement of a liquid sample from a first area of
the membrane to a second area of the membrane;
a detection site disposed on the membrane between
the first and second areas;
a non-absorbent medium disposed on the membrane
10 between said detection site and the membrane first area,
the medium being attached to the membrane by an adhesive;
and
a dry reagent disposed between the medium and the
membrane, in order to enable mobilization of the reagent by
15 passage of said liquid sample and entry into the membrane
and liquid sample before the liquid sample reaches said
detection site.
2. The device according to claim 1 where said dry
20 reagent is disposed between the adhesive and the membrane.
3. The device according to claim 2 wherein said dry
reagent is in the form of a stripe, said stripe being
generally transverse to a direction of sample migration.
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4. The device according to claim 1 wherein the
reagent is particle based in an aqueous buffer solution.
5. The device according to claim 4 wherein the
30 medium comprises Mylar®.
6. The device according to claim 1 wherein said dry
reagent is adhered only to the medium.

7. The device according to claim 6 wherein said dry reagent is in the form of a stripe, said stripe being aligned transverse to a direction of sample migration.

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8. The device according to claim 6 wherein the reagent is particle based in an aqueous buffer solution.

9. The device according to claim 8, said dry reagent
10 comprises between about 2% and about 30% w/v sugar.

10. The device according to claim 9 wherein said sugar comprises sucrose.

11. A method of producing a binding assay device,
15 said method comprising the steps of:

providing a porous membrane comprising a material enabling capillary movement of a liquid sample from a first area of the membrane to a second area of the membrane;

20 disposing a detection site on the membrane between the first and second areas;

providing a non-absorbent medium having a bottom side with an adhesive disposed on the bottom side;

25 disposing a particle based reagent onto the medium bottom side;

evaporating a solvent in the particle based reagent to provide a dry reagent on the medium bottom side; and

30 adhering the medium bottom side to the membrane between the first area said deduction site.

16. The method according to claim 15 wherein the non-porous medium is provided with adhesive covering the center

medium bottom side and the solublized reagent is disposed onto the adhesive.

17. The method according to claim 16 wherein the
5 evaporated reagent is disposed as a bead along the non porous medium and the step of evaporating the subject results in a stripe of dry reagent along the medium.

18. The method according to claim 17 wherein the step
10 of evaporating the subject includes evaporating a water solvent.

19. The method according to claim 18 wherein the
15 solublized reagent includes a concentrate of a sugar.

20. The method according to claim 19 wherein the
sugar is present in an amount between 2% and 30% W/V.

21. The method according to claim 19 further
20 comprising the step of varying a concentrate of the sugar in the solublized reagent in order to control a rate of mobilization of the reagent into the membrane upon passage of liquid sample therepast.

22. The method according to claim 19 further
25 comprising the step of varying a concentration of the sugar in the particle based reagent in order to increase a viscosity thereof thereby enabling reagent to be applied in bead form without collapse or separation of the bead upon
30 movement of the medium and drying of the solublized reagents.

23. A method of producing a binding assay device, said method comprising the steps of:

providing a porous membrane comprising a material enabling capillary movement of a liquid from a first area of the membrane to a second area of the membrane;

disposing a detection site on the membrane between the first and second areas;

providing a non-absorbent medium having a bottom side with an adhesive disposed on the bottom side;

disposing a solublized reagent onto the adhesive;

evaporating a solvent in the particle based reagent to provide a dry reagent on the adhesive; and

adhering the medium bottom side to the membrane between the first area and said detection site.

24. The method according to claim 23 wherein the non-porous medium is provided with adhesive covering an entire medium bottom side.

25. The method according to claim 24 wherein the evaporated reagent is disposed as a bead along the non-porous medium and the step of evaporation the solvent results in a stripe of dry reagent along the medium.

26. The method according to claim 25 wherein the step of evaporating the solvent includes evaporating a water solvent.